Rapid Prototyping

U N I V E R S I T Y O F U T A H

CENTER

The Center for Rapid Prototyping is focused on commercializing technologies related to ultrasonic sensing for injection molding processes, and physical and virtual geometric modeling for computer aided design.

TECHNOLOGY

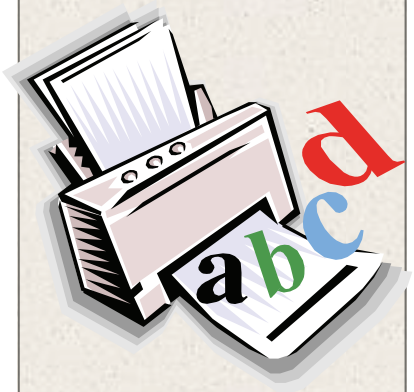
The Center has been working on multiple projects, including: Machining techniques that allow the prototyping of geometric objects of arbitrary complexity on a 3 axis CNC mill with limited tools and little operator skill required; a series of new sensors and controls for improved polymer processing; a Personal Prototyping System (PPS) that makes rapid prototyping affordable for small companies and perhaps even the average consumer; low cost 3-D scanning technologies that make the acquisition of 3-D geometric data practical and affordable for reverse engineering, medical imaging/reconstruction, etc.; a device that is capable of producing very large prototypes (Shapemaker); and a photopolymer-based technique to create prototypes in a single step (Inverse Tomographic Construction). New micro and nano-scale polymer manufacturing techniques have been developed, including a micro-forging technique and a nanoscale injection molding machine.

ACCOMPLISHMENTS

Milestones met include the production of the first micro-scale injection molded parts, the completion and testing of a production-type prototype high temperature ultrasound transducer and control system, and the production and test marketing of individualized replicas of human faces captured in a polymer-based collectible. With a cumulative 15:1 ratio of matching funds and one spin-off company already formed, the Center continues to progress toward graduation.

THINK TANK

What if there was...



A product that develops and creates simple prototypes at a very low cost on your own desktop printer???

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